



THE IMPORTANCE OF USING LOGICAL METHODS IN DEVELOPING STUDWNTS' KEY COMPETENCIES IN BIOLOGY LESSONS

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Abstract

This article discusses the content of the formation of subject competencies in students along with key competencies based on the curriculum in biology.

Keywords: Biological education, competencies, key competencies, subject competencies

Introduction

In the Republic, the issues of improving the educational system and raising the harmonious generation have become a priority of state policy. In the education system of the country, large-scale reforms are being carried out to introduce innovative technologies and information and communication means into the educational process, to increase the intensity and effectiveness of teachings, their adaptation to world standards. In the Coordination on the development of the public education system of the Republic of Uzbekistan until 2030, a number of proposals were adopted: "Qualitative updating of the content of the continuous education system, as well as training, retraining and advanced training of professional personnel, improvement of teaching methods, step-by-step introduction of the principles of individualization in the educational process, introduction of modern information and communication technologies and innovative projects in the field of public education" On the basis of the proposed legislation, priority directions were defined aimed at introducing biological science in schools, among other subjects, in accordance with world standards. In Uzbekistan, in accordance with the Decree of the First President of December 12,



Modern American Journal of Biological and Environmental Sciences

ISSN (E): 3067-7920

Volume 01, **Issue** 02, May, 2025

Website: usajournals.org

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2012 aimed at improving foreign language teaching, for the first time the DTS based on a competency approach was developed and implemented gradually from the 2013-2014 academic year. What should its structure be in order for it to be competency? It is natural to ask. A list of structural components of the competency was formed. An attempt has been made to distinguish educational competencies from competencies. For example, although a student learns civil competency at school, he uses it full-fledged after graduating from school. Accordingly, such co-operatives manifest themselves as educational competence during the period of study. Basic competencies - relate to the general part of the educational content; 1) general subject competencies - related to a certain range of academic subjects and areas of study;

2) Subject competencies - are formed within the framework of the academic subject, which is private in comparison with the previous two. Basic competencies are concreted each time for a particular stage of study and established subject of study. In order to incorporate the formation of competencies into the course process, they must be given in the form of activities . In the process of forming the student's worldview, student-listener is an individual-oriented educational technology - education aimed at developing the student's personality, features, abilities, taking into account the strategy of thinking and action. In the context of globalization, education plays an important role in bringing up a person in all aspects of adulthood, the formation of qualities inherent in a competent and qualified specialist. Today's fast-paced period requires equipping students with grounded information in a short time, creating the necessary conditions for them to thoroughly master the basics of various subjects. In modern conditions, in accordance with all the possibilities of the educational process, it is required to focus on the development, socialization of the individual, as well as the education of independent, critical, creative thinking skills. Education that is able to manifest these potentials in itself is called person-centered education. Person-centered education is education aimed at developing the student's personality, characteristics, abilities, taking into account the strategy of thinking and action.



Modern American Journal of Biological and Environmental Sciences

ISSN (E): 3067-7920

Volume 01, **Issue** 02, May, 2025

Website: usajournals.org

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It refers to the adaptation of the educational environment to the capabilities of the student. According to him, the educational environment, pedagogical conditions, the entire educational and upbringing process are the fulfillment of the student's personal potential, the development of abilities, the development of personality, the enrichment of his thinking and worldview.

A distinctive aspect of person-centered education is the recognition of the learner's personality, the creation of a conducive and necessary environment for his or her comprehensive development.

A teacher must strictly adhere to a number of conditions when using person-centered types of education in the educational process. These requirements include:

- be able to see each student as an individual, unique person;
- respect for the reader;
- the ability to correctly assess the student's mental state;
- Taking into account the wishes and interests of the student;
- tolerant attitude towards each student;
- confidence in the student's strength, capabilities and aspirations;
- create a comfortable learning environment for every student;
- to provide opportunities for students to work independently or in small groups;
- teaching students to independently control their activities, determine the effectiveness of their activities, analyze the factors of achievements and the consequences of mistakes;
- not to harass any student in the educational process;
- not to exaggerate the shortcomings of an individual student;
- if the student's inability to assimilate knowledge, improper behavior in the educational process is recorded, then without drawing a firm conclusion, to determine the reasons;
- elimination of such situations as the student's inability to assimilate knowledge, indecent behavior on the part of the student, without prejudice to the student's honor and pride, on the basis of the identified reasons;
- the ability to create an "environment of success" for each student in the educational process;



Modern American Journal of Biological and Environmental Sciences

ISSN (E): 3067-7920

Volume 01, Issue 02, May, 2025

Website: usajournals.org

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- To help every student succeed in their education;
 - to help the student develop his or her abilities, as a person;
 - Assessment of the student's specific behavior, not his personality;
 - As a teacher, it is imperative that he be able to earn the respect and trust of every student.

The following basic principles will be characteristic of person-centered technologies of learning:

- humanitarianism, that is, respect and love for a person, assistance to him, confidence in his creative abilities, complete renunciation of violence;
- cooperation, that is, democracy, equality, partnership in the relationship between teachers and students;
- free upbringing, that is, giving a person the freedom and independence to choose a wide or narrow scope of his life activity, to produce results not from external influences, but from internal emotions.

Thus, the use of logical methods with students during the lesson gives a great effect in shaping basic competencies

The group of logical teaching methods includes:

These methods determine the direction of the content of the educational material, allow students to isolate the main idea, analyze the object being studied, master the skills of comparison, generalization, methods of mental activity, develop abstract thinking, understand cause-and-effect connections. This group includes inductive, deductive, analysis, methods of separation, comparison, and generalization of the main idea

In the inductive method, students' attention is first drawn to the study of private facts, and then to draw general conclusions from the particular. For example, an inductive general understanding of the adaptation of living in the aquatic environment is formed by studying the signs of a particular structure of fish (body shape, skin, the presence of fins, sideways, respiration, reproduction) and other characteristics.

In the deductive method, students first study general laws, and then are taught to draw specific conclusions from the general. The deductive way can also be applied to the land environment of reptiles, the adaptation of birds to soaring.



Modern American Journal of Biological and Environmental Sciences

ISSN (E): 3067-7920

Volume 01, Issue 02, May, 2025

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With the help of the method of analysis, students perceive and perceive information, identify similarities and differences of studied objects, divide the studied objects into components, determine the beginnings and causes between them.

The method of separating the main idea is important, dividing and sorting the main idea in the educational material, dividing information into logically completed thought parts, separating the main idea and secondary thoughts, separating key words and concepts, preparing the ground for drawing conclusions about the main idea.

With the help of the method of comparison, students learn to identify comparative objects given in the educational tasks, to identify the main signs of objects, to compare, to identify similarities and differences, to formalize the results of comparison with conditional symbols. In the process of problem solving, the generalization method prepares the ground for the identification of typical facts in the educational material, comparison, preliminary conclusions, visualization of the dynamics of the development of the phenomenon, formalization of the results of generalization using conditional symbols, and general conclusions. For example, from materials related to the structure of aquatic and terrestrial inhabitants, reptiles, mammals, the main evidence showing the similarity and difference between them can be shown the development of five-toed legs, the structure of the skin, reproduction, respiration, the development of the spine, circulatory system, the method of reproduction. Based on this data, it is possible to conclude that the appearance of five-toed legs, breathing with lungs, is related to the adaptation of animals to living on land.

Methods of independent work. The group of methods of independent work includes methods of independent work on textbooks, additional textbooks and exhibition tools. One of the features of the method of independent work is the performance of students' educational tasks without direct supervision of the teacher. The method of independent work involves the organization and management of students' independent learning activities. In this method, the results of independent observation and experimentation, problems and exercises



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on textbooks, additional educational literature, exhibition tools are considered the source of knowledge.

Like all methods, the method of independent work has an educational, educational and developmental function.

As an educational task, it can be noted that it provides students with independent acquisition of knowledge and skills, deepening, strengthening and repeating knowledge. They are especially important for the students' mastering of practical learning skills and qualifications, since independent inactive skills cannot be raised to the level of qualification of an automated and creative nature. The educational direction helps students to develop independence, cognitive activity, spirituality, an active life position, diligence and human qualities. Its task in the development direction is to help students develop their scientific worldview, thinking, skills and abilities, to strengthen their will.

Methods of independent work include the assignment of independent work assignments, the development of independence in educational activities, the composition of educational labor qualifications, the organization of independent work in accordance with the model, and the methods of assigning creative tasks.

Methods of stimulating and justifying students' activities in teaching. **The group of methods for stimulating and justifying students' activities in** teaching ensures enthusiasm and activity in mastering new learning material through pedagogical incentives in the educational process. These methods prepare the ground for the development of students' interest in cognition, mental activity, needs to acquire new knowledge, communication culture, self-control and management, and assessment skills. It also explains the social importance of education, instills in students conscious discipline, duty and responsibility. The group of methods for stimulating and justifying students' activities in teaching includes methods of increasing interest in learning, didactic games, educational discussions, forming the duties and responsibilities of students in education, which are as follows:

Methods of increasing interest in reading are the creation of positive emotions in students, the use of interesting analogies, the effect of fascination, the joy of knowing, the method of stimulating and chastising students. **Didactic game**



method is the choice of game scenarios, the creation of game situations, the choice of educational games, and the method of stimulating students. The method of educational discussions is a method of creating a situation that provokes academic debates, creating scientific debates, guiding students to success, expressing students' opinions, correcting errors in their answers, motivating students. The method of forming the duties and responsibilities of students in education includes such methods as explaining the social importance of education, explaining the personal importance of learning, setting educational requirements, encouraging and reprimanding teaching.

Methods of control and self-control in teaching. Control is an integral part of the educational process. Regularity and consistency of supervision encourages students to work actively, paving the way for the development of responsible, duty, attention, memory, self-control and assessment skills. Completeness, truthfulness, comprehensiveness, regularity of control allow to carry out the functions of these methods, such as educational, upbringing, developmental and a balanced approach to students. Examples of this group of methods are verbal and written control, control using laboratory and practical work, self-control, control with the help of a cross-control sheet and tests. Verbal and written control methods are used to teach students to present knowledge logically and consistently, to improve speech, to identify and eliminate typical errors in students' answers.

Control methods using laboratory and practical work, determination of educational and practical skills, determination of students' skills with educational equipment and tools, determination and evaluation of the quality of completed tasks, the correct selection of objects and tools depending on the content of the work, completion and formalization of the result, determination of the correctness of the results obtained.

Self-control methods include a short plan for the educational material, creating questions, highlighting the main idea, finding answers to questions, solving problems and checking them according to the sample, compare, checking the correctness of the results obtained.



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ISSN (E): 3067-7920

Volume 01, **Issue** 02, May, 2025

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The chapter in which control methods are studied using a mutual control sheet, the composition of control questions on the topic, methodological correctness, logical sequence of questions, truthfulness and scale of control over students' knowledge.

The chapter in which control methods with the help of tests are studied, the composition of control tests on the topic, methodological correctness, logical sequence of test questions and answers, the truthfulness and scale of control over students' knowledge.

Like all methods, control and self-control methods in teaching have an educational, educational and developmental function. The teacher ensures the educational task of supervision by inviting all students to listen to their friend's answer, correct errors and omissions in the answer, and propose corrections and additions. Therefore, this process systematizes, repeats and strengthens the knowledge that students have mastered. The educational task of control is manifested in its motivation of students, the formation of responsibility and duty in education, the formation of emotions. The developmental function of control is observed in the acquisition of stable attention, memory strengthening, self-control and assessment skills in students. . In students, it is not possible to form and develop creative thinking skills without the teacher using the above-mentioned methods and also developing independent thinking skills. Creative thinking skills form the basis of creative activity experiences. In acquiring creative activity experiences, students must be able to analyze, compare, disassemble, disassemble, synthesize, visualize, summarize, and conclude the object under study using methods of mental activity. Only then will students develop competencies that will be able to apply the theoretical knowledge acquired in the course of mastering biological sciences, features that form the basis of creative activity.

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Modern American Journal of Biological and Environmental Sciences

ISSN (E): 3067-7920

Volume 01, **Issue** 02, May, 2025

Website: usajournals.org

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фармони.-қонун ҳужжатлари маълумотлари миллий баъзаси,
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